

# **NOZZLE STRUCTURE OF A LAWN SPRINKLER**

## **RELATED U.S. APPLICATIONS**

Not applicable.

## **STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT**

Not applicable.

## **REFERENCE TO MICROFICHE APPENDIX**

Not applicable.

## **FIELD OF THE INVENTION**

[0001] The present invention relates generally to a lawn sprinkler, and more particularly to a leakproof nozzle structure of the lawn sprinkler.

## **BACKGROUND OF THE INVENTION**

[0002] As shown in FIG. 5, a sprinkler nozzle structure of the prior art comprises a nozzle piece 50, a guide seat 60, and a receptacle 70. The guide seat 60 is provided at one end with a fastening portion 61, and at the other end with a tapered portion 63. Located between the fastening portion 61 and the tapered portion 63 is a fitting portion 62. The fastening portion 61 is used to fasten the nozzle piece 50, while the tapered portion 63 is located in the receptacle 70.

[0003] Such a prior art nozzle structure as described above is defective in design in that the fitting portion 62 of the guide seat 60 is apt to fit improperly into an outer end 71 of the receptacle 70, and

that the tapered portion 63 of the guide seat 60 is susceptible to dislocation, as illustrated in FIG. 6. In light of such deficiencies as described above, the prior art nozzle structure is prone to leak.

### BRIEF SUMMARY OF THE INVENTION

[0004] The primary objective of the present invention is to provide a lawn sprinkler with a nozzle structure which is provided with means to prevent leak.

[0005] In keeping with the principle of the present invention, the foregoing objective of the present invention is attained by a nozzle structure comprising a nozzle piece, a guide seat, and a receptacle. The nozzle piece is provided with a plurality of water emission holes. The guide seat is provided at one end with a fastening portion for holding securely the nozzle piece, and at the other end with a tapered portion. The guide seat is further provided with a leakproof flange which is located between the fastening portion and a fitting portion of the tapered portion. The guide seat is joined with the receptacle in such a way that the tapered portion of the guide seat is snugly located in a locating portion of the interior of the receptacle, and that a front open end of the receptacle is sealed off by the leakproof flange of the guide seat.

[0006] The features and the advantages of the present invention will be more readily understood upon a thoughtful deliberation of the following detailed description of a preferred embodiment of the present invention with reference to the accompanying drawings.

### BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0007] FIG. 1 shows a perspective view of the preferred embodiment of the present invention.

[0008] FIG. 2 shows an exploded view of the preferred embodiment of the present invention.

[0009] FIG. 3 shows another exploded view of the preferred embodiment of the present invention.

[0010] FIG. 4 shows a longitudinal sectional view of the preferred embodiment of the present invention in combination.

[0011] FIG. 5 shows an exploded view of a nozzle structure of the prior art.

[0012] FIG. 6 shows a longitudinal sectional view of the nozzle structure of the prior art.

### DETAILED DESCRIPTION OF THE INVENTION

[0013] As shown in FIGS. 1-4, a nozzle structure embodied in the present invention is used along with a lawn sprinkler (not shown in the drawings.) The nozzle structure comprises a nozzle piece 10, a guide seat 20, and a receptacle 30.

[0014] The nozzle piece 10 is provided with a center through hole 11 and a plurality of water emission holes 12.

[0015] The guide seat 20 is provided at one end with a fastening portion 21, a fitting portion 22, and a leakproof flange 40 located between the fastening portion 21 and the fitting portion 22. The guide seat 20 is further provided at the other end with a tapered portion 23, and in the interior with a fastening projection 25 and a water duct 26. The fastening projection 25 is provided with a threaded hole 24. The water duct 26 is provided with an outlet 27. The nozzle piece 10 is fastened with the guide seat 20 by a fastening bolt 13, which is engaged with the threaded hole 24 of the guide seat 20 via the center through hole 11 of the nozzle piece 10.

[0016] The receptacle 30 is provided at one end 31 with an opening 32, and in the interior of other end thereof with a locating portion 33. The guide seat 20 is received in the receptacle 30 in such a manner that the tapered portion 23 of the guide seat 20 is located in the locating portion 33 of the

receptacle 30, and that the fitting portion 22 of the guide seat 20 is fitted securely into the opening 32 of the receptacle 30, and that the opening 32 of the receptacle 30 is sealed off by the leakproof flange 40 of the guide seat 20, as shown in FIG. 4.

**[0017]** The embodiment of the present invention described above is merely illustrative. Accordingly, the present invention may be embodied in other specific forms without deviating from the spirit thereof. The present invention is therefore to be limited only by the scope of the following claim.